CHAPTER ONE: INTRODUCTION

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INTRODUCTION

The environmental impacts of recreational boating are well studied and widely documented. Scientific literature abounds with studies regarding the physical damage and disturbance caused by traditional vessels such as outboard motorboats and sailboats, as well as the impacts linked to boating-related activities such as fishing and water skiing. Resource managers and municipal officials use these studies to develop comprehensive boating policies that effectively balance recreational water uses with natural resource protection; however, recent increases in the popularity and use of personal watercraft (PWC) have complicated such policy development. These controversial vessels, which are easily distinguished by their unique design and operational characteristics, create a variety of concerns for both resource managers and the public.

Few studies specifically examine the consequences of PWC use but these vessels are frequently associated with management issues such as multiple-use conflicts, noise complaints, safety concerns and natural resource damage. Efforts to alleviate these problems are complicated by debates regarding scientific uncertainty, public perception, individual biases and the feasibility of different management strategies. These debates hamper the collaborative and consensus-building processes that are necessary to develop successful management initiatives. This manual attempts to inform these debates and improve management efforts by providing updated information about PWC and how they affect coastal and marine resources.

1.1 PWC HISTORY

PWC are compact, powerful and agile vessels that have revolutionized the world of recreational boating. According to the United States Coast Guard (USCG), PWC are classified as inboard boats under 16 feet in length; however, PWC are more generically described as:

> …any vessel propelled by a water jet pump (rather than a propeller) …that is designed to be operated by a person sitting, standing or kneeling on the vessel (rather than in it).

This definition does not place size restrictions on PWC, nor does it include open-cabin vessels or non-motorized craft.

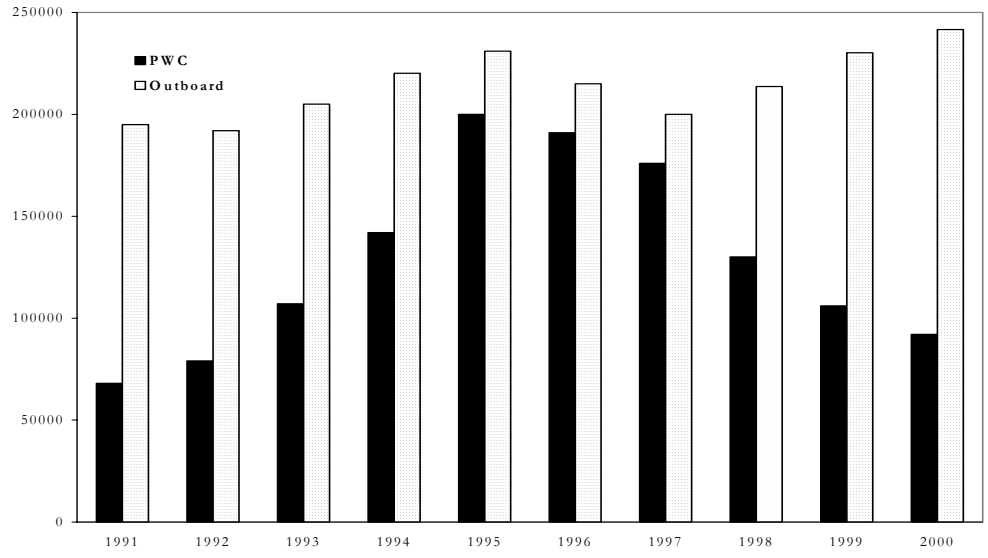
PWC were invented in the 1960s but they did not achieve commercial success until the early 1970s, when Kawasaki introduced its landmark Jet Ski®. Since then, several other marine manufacturers have also profitably marketed PWC, including Bombardier (Sea-Doo®), Honda, Polaris and Yamaha (Waverunner®) (PWIA 2000). The innovation and success of these companies has created a complete PWC-subculture that includes competitive events, membership clubs, trade associations, consumer magazines and Internet sites. PWC use, which began as a unique marketing scheme in the 1970s and exploded into a rapidly growing sport in the 1980s, has, in recent years, matured into a modest yet profitable sector of the recreational boating world.

1.2 PWC POPULARITY

PWC are appealing to some boaters for several reasons. First, compared to most other motorized vessels, the cost and maintenance involved in owning a PWC is relatively low. Second, PWC are easy to trailer, transport and launch. Their small size makes them easy to tow or store but they are large enough to accommodate up to four passengers and carry large amounts of fuel and gear. These attributes make PWC ideal for boaters who travel or are unable to moor a larger vessel. Third, PWC are simple to operate and can be used by individuals with very little instruction or training. Finally, many people think PWC are fun. These versatile vessels provide an exciting mix of speed, power and maneuverability and enable riders to participate in a wide range of activities including pleasure cruising, long-distance touring, racing and water skiing. In general, PWC have expanded the world of recreational boating to a larger, more diverse sector of the public and will most likely continue to be used throughout coastal and inland waterways.

It is widely asserted that PWC are the fasting growing sector of the boating industry and that their sales are skyrocketing. However, data from the National Marine Manufacturers Association (NMMA) suggest otherwise. As shown in Figure 1, NMMA data indicates that PWC sales exploded in the early 1990s, but that they peaked in 1995 and have been steadily decreasing ever since. Outboard motorboat sales, on the other hand, remained rather stable throughout the 1990s and have even been increasing in the past few years (NMMA 2000).

Figure 1. Annual Vessel Sales



Unfortunately, the NMMA data only accounts for the sale of new motorboats and PWC, not used ones. Since the NMMA does not track the resale of motorboats and PWC, more accurate comparisons between vessel sales cannot be made. However, national vessel registration data suggest that PWC ownership has decreased slightly in recent years, while the

ownership of other motorized vessels has increased (NMMA 2000). Decreases in PWC registrations are due to declining PWC sales, as well as to their relatively short life spans, which have resulted in the scrapping of a large number of the PWC sold in the early 1990s. Regardless of decreasing ownership and sales, overall PWC use continues to be significantly high. For example, in 1999, only 1.1 million PWC were registered nationally (NMMA 2000) but about 19.5 million people participated in PWC use (Leeworthy 2001). By comparison, 51 million people participated in motorboating that year, but almost 17 million motorboats were registered. These data suggest that PWC have carved a relatively small, yet persistent niche in the world of recreational boating.

1.3 OVERARCHING PWC MANAGEMENT CONSIDERATIONS

Readers should keep a few overarching considerations in mind when reading this manual:

- Despite significant gaps in PWC-specific research, a wealth of peer-reviewed scientific literature exists regarding the environmental impacts of recreational boating. This information facilitates well-informed management initiatives by identifying assumptions and clarifying perceptions regarding PWC operation and design. It also enables managers to correctly differentiate between PWC and other vessels.

- Much of the existing information on PWC design is dated and does not account for recent technological advances that have made newer PWC models safer, more fuel-efficient and less polluting.

- Generally, the adverse impacts attributed to PWC also apply to other recreational vessels and activities, as well as various landside activities. To effectively protect natural resources and public safety, PWC impacts should be assessed and managed in a manner that considers the impacts of other recreational and aquatic uses.

- PWC management should be a site-specific process. Certain generalizations can be made about PWC design, use and impact but the factors contributing to PWC-related impacts vary widely. These factors include physical characteristics such as water depth, wildlife presence and habitat type, as well as operational characteristics such as local PWC usage levels or operator education and experience. Supplemental, site-specific data and information are necessary to identify the impacts that are occurring in a given area and to select effective management alternatives.

1.4 PURPOSE OF THE *PWC MANAGEMENT GUIDE*

In general, this manual serves as a reference handbook for the diverse array of individuals, agencies and communities involved in PWC management. It targets a large audience and provides instruction on assessing and managing PWC impacts. Moreover, it offers a framework by which to evaluate individual PWC management efforts and, if used by communities sharing a given body of water, it enhances the consistency and compatibility of concurrent management efforts.

The manual begins by summarizing the information that currently exists regarding recreational boating and PWC impacts. When possible, it compares PWC-related impacts to those of more traditional recreational vessels and attempts to clarify public perception of PWC. It also discusses the information and data needed to conduct site-specific PWC assessments and illustrates a broad range of management strategies that can be used to mitigate PWC impacts. Finally, this manual presents some general policy considerations to guide PWC management. Although it is not exhaustive, this manual is one of the most inclusive PWC references available at this time.

1.5 References

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